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NOTES ON SOME CENTRAL AMERICAN SNAKES.

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Last winter the senior author spent several months in Central America, largely in the Panama Canal Zone, being occupied there with the building of the Barro Colorado Island Laboratory of the Institute for Research in Tropical America. This left him but little time for field work in herpetology. His two companions, however, W. Sprague Brooks, Esq., and Dr. Edward Wigglesworth collected extensively and many amphibians especially were gathered. The collection of snakes would not have been large but for the assistance and zeal of Mr. J. B. Shropshire, Chief Sanitary Inspector for the U.S. Army, who not only made all of his own subordinates watch constantly for reptiles but secured many specimens through the kind interest of his friends in the Army Medical Corps. All of these various naturalists often worked in more or less the same areas so that many individual specimens do not bear the collector's name, having been put in containers holding reptiles from a given locality. For this reason it is particularly important to acknowledge with cordial thanks Mr. Shropshire's aid, since the Museum record will not emphasize this as it deserves to be.

We have chosen only a few snakes to discuss in these short notes since naturally a great number of specimens represent well-defined species already recorded from the Panamanian area. A single specimen from Venezuela is included which was found among unidentified material in the Museum of Comparative

Zoölogy.

#### Constrictor constrictor imperator (Daudin).

It is probable that the Central American "boa constrictor" should stand as a subspecies of the South American C. constrictor and it is probably simply an intermediate between that species and mexicana, the most northerly race. C. diviniloquus Laurenti from the Lesser Antilles and C. occidentalis (Philippi) are apparently full species well differentiated isolation.

The Central American race is not uncommon in the forested areas and adults as well as young are in the collection from the

Canal Zone.

## Leptotyphlops affinis (Boulenger).

A second record for this rare species is afforded by No. 18862, Museum of Comparative Zoölogy, from Merída, Venezuela, collected by Colonel Wirt Robinson on June 11, 1908. This locality is in the same mountainous region as the type locality, which is Táchira, somewhat to the westward of Merída.

#### Liophis decorata (Günther).

Three stages in the evolution of color pattern are shown by specimens in the collection. No. 4539, Museum of Comparative Zoölogy, is a young example from the mountains of Alvarez, near San Luis Potosí, Mexico; No. 18931, Museum of Comparative Zoölogy, a half-grown specimen from Fort Sherman, near Colon, and an adult, No. 15310, Museum of Comparative Zoölogy, is from Santa Cecilia, Costa Rica.

In the smallest specimen the canthal and nuchal stripe is continuous and distinct, in the Panamanian example it is interrupted on the left side behind the temporal region for a distance of about two millimeters, while in the adult from Costa Rica the streak is broken on each side so that two yellow black-edged spots are all that is left, one between the parietal and anterior temporal and the other on the nape. The canthal stripe tends also to disappear

with age.

The dorsum of the youngest specimen is brown with three longitudinal black lines; the lateral stripe, which runs on each side between the fourth and fifth scale-rows, is bordered mesially by a light-colored zone. With age the vertebral line disappears and a wide dark-brown streak appears in its place and this extends laterally to the black side-lines from which it is separated by the light-yellow mesial border. On the apex of each gastrostege in the young there is a very tiny black dot, which is large and distinct in the half-grown but in the adult is almost completely obliterated by the invasion of very dark brown pigment which extends progressively downward from the black lateral streak. Thus, comparing young with adult, in the former one observes a snake with three black longitudinal dorsal lines; in the latter a dark-brown snake with two light yellow lateral lines each bordered inferiorly with very dark brown, almost black. Garman (Bull. Essex Inst., vol. 19, 1887, p. 9 of separate) hinted at these color changes but had only No. 4539, Museum of Comparative Zoölogy, before him to compare with the descriptions.

## The species has not been previously reported from Panama.

#### Coniophanes punctigularis Cope.

A specimen taken by Messrs. Brooks and Wigglesworth at Barro Colorado Island seems to represent the most southerly record for this rather unusual species.

#### Phrynonax poecilonotus (Günther).

A typical example from near Gatun, Canal Zone, collected by a soldier of Fort Davis.

#### Phrynonax shropshirei, sp. nov.

Type.—No. 18819, Museum of Comparative Zoölogy, an adult male from the vicinity of Gatun, Canal Zone of Panama.

Paratype.—No. 18820, Museum of Comparative Zoölogy, from Fort Sher-

Paratype.—No. 18820, Museum of Comparative Zoölogy, from Fort Sherman, Canal Zone, collected by Mr. J. B. Shropshire, Chief Sanitary Inspector, U. S. Army, Canal Zone.

Description.—Sixteen maxillary teeth, posterior slightly enlarged; anterior mandibular teeth longest; diameter of the eye one-half as long as its distance from the end of the snout, 7:14.

Rostral slightly wider than deep (8:7), just visible from above; internasals two-thirds as long as the prefrontals (4:6); frontal as long as wide (10:10), as long as its distance from the end of the snout, a little shorter than the parietals (10:12); loreal a little longer than deep (3:2); one preocular forming a suture with the frontal; two postoculars; temporals 2+; seven (right) and eight (left) upper labials, fourth and fifth or fourth, fifth and sixth entering the orbit, eighth very much the longest; seven to eight lower labials in contact with the anterior chin-shields which are much shorter than the posterior (10:17). Scales in 25 rows (21-24-25-24-21-19-17-15), the three median rows feebly keeled. Ventrals 211, obtusely angulate laterally; anal entire; subcaudals 116+n (113p.+3+n), divided. Blackish brown above, irregularly barred with yellow, dorsal scales either entirely black or black-edged; head dark brown above, wide border on upper lip yellow, above blackish. Lower surface yellowish, gradually changing to almost clear black posteriorly, including all of the tail; ventrals on anterior portion of body dark-edged. Total length 1630 mm.; tail 430 mm.

The paratype, also an adult male, has eight upper labials of which the fourth, fifth and sixth enter the orbit; six or seven lower labials in contact with the anterior chin-shield; ventrals 215; anal 1; caudals 93 pairs+n.

The general coloration of the paratype is somewhat lighter than that of the type but the pattern is exactly the same. Total

length 1460 mm.; tail 330.

#### Tretanorhinus nigroluteus Cope.

Two specimens, No. 2717, Museum of Comparative Zoölogy, collected by Dr. G. A. Maack at Bas Obispo (now under Gatun Lake) show the prefrontals completely divided in both cases. So also, in No. 826, Museum of Comparative Zoölogy, from San Juan del Norte, Nicaragua, which is the type of *Helicops agassizii* Jan. Two recently acquired examples likewise show this condition to a lesser degree in that the prefrontals are only partially divided. These two are No. 18,812 from near Fort Sherman near Colon and No. 18,818 from Fort Randolph also near Colon.

According to Boulenger, T. mocquardi Bocourt, has but a single prefrontal while in nigroluteus it is supposed to be double. Moreover, in T. mocquardi the scale-rows are said to be 19 while in nigroluteus they are 21; so also, the preoculars are said to be

two and three respectively. In No. 18,818, however, the preoculars are three on the right side and two on the left and the scale rows are 21; while in No. 18,812 the scale-rows are 19 in number, and but two preoculars are present. There seems no reason therefore to continue to recognize *T. mocquardi* as valid.

This is one of the very few neotropical species that frequent salt water. It is found about mangrove swamps, if not exclusively, at least frequently, having much the habits of *Natrix compressi*-

cauda.

#### Pseudoboa petola (Linné).

Coluber petola Linnè, Syst. Nat., ed. 10, vol. 1, p. 225, 1758.

This wide-ranging species is apparently rare in Panama although common throughout most of its enormous range. It is represented in our collection by several specimens from Ancon, Canal Zone, taken by Mr. James Zetek, of the U. S. Department of Agriculture, and others. The Harvard party in Panama during 1924, as during other trips, is much indebted to Mr. Zetek for very many favors.

#### Micrurus dunni Barbour.

No. 18,813, Museum of Comparative Zoölogy, from near Corozal, Canal Zone. This is the second recorded example of this species. It is much larger than the type, being 350 millimeters long, the tail 26 mm. in length, thus nearly double the length of the original specimen (Occ. Papers, Mus. Zool. Univ. Michigan, no. 129, p. 15, January 25, 1923). That snake was described as having the third and fourth upper labials nearly equal in size but the second example shows that the third labial in the adult is much larger than the fourth. This agrees with the condition in the closely allied forms such as M. lemniscatus, M. filiformis and M. hollandi. This specimen has nine triads of rings as against eleven in the type.